FIG . 1

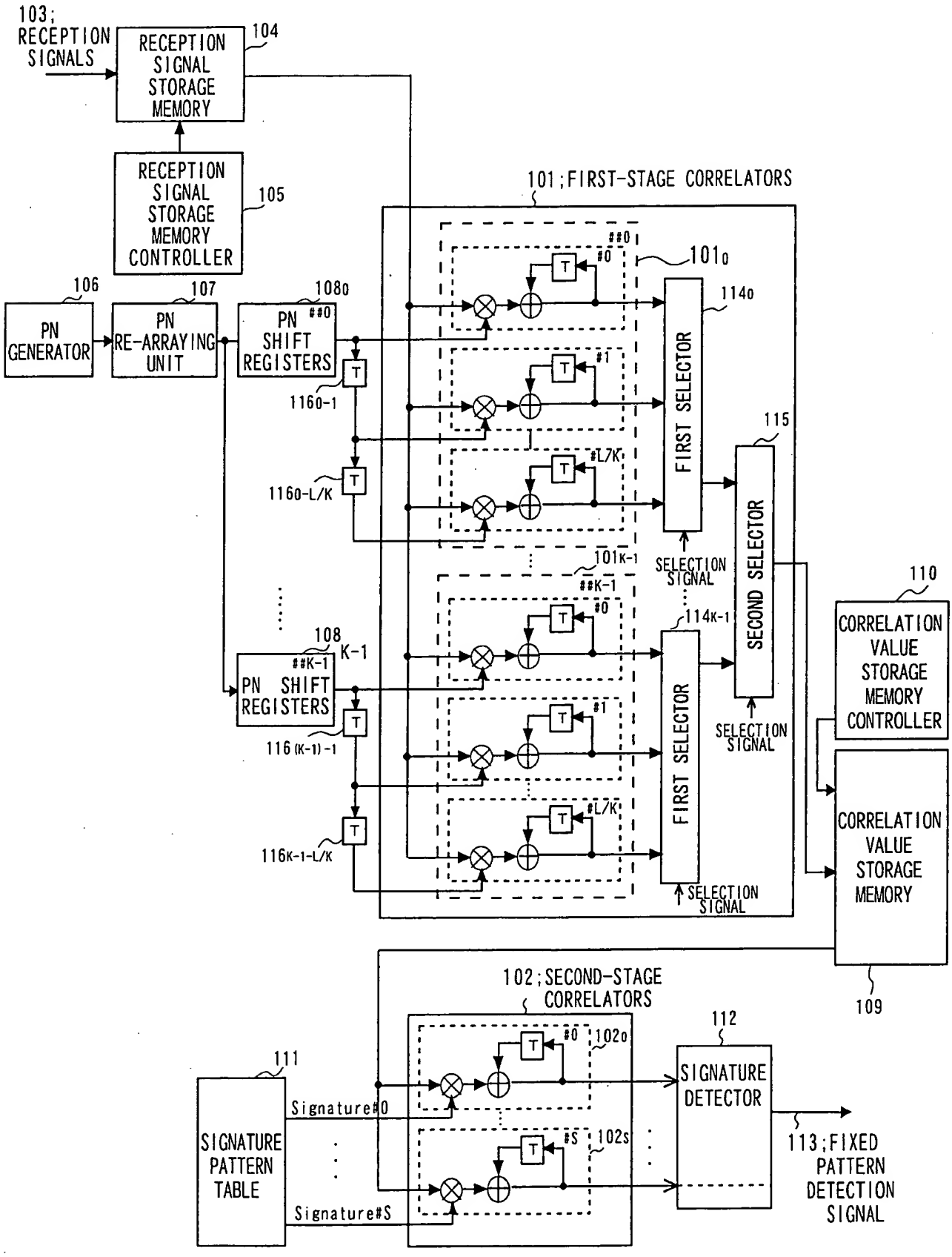

103;
RECEPTION
SIGNALS
RECEPTION
SIGNAL
STORAGE
MEMORY
104
RECEPTION
SIGNAL
STORAGE
MEMORY
CONTROLLER
105
101;FIRST-STAGE CORRELATORS
106
PN
GENERATOR
107
PN
RE-ARRAYING
UNIT
108o
PN
SHIFT
REGISTERS
##0
#0
#1
#L/K
T
116o-1
116o-L/K
101o
114o
FIRST SELECTOR
115
SECOND SELECTOR
SELECTION
SIGNAL
101K-1
##K-1
114K-1
108
K-1
PN SHIFT
REGISTERS
116(K-1)-1
116K-1-L/K
110
CORRELATION
VALUE
STORAGE
MEMORY
CONTROLLER
CORRELATION
VALUE
STORAGE
MEMORY
109
102;SECOND-STAGE
CORRELATORS
111
SIGNATURE
PATTERN
TABLE
Signature#0
Signature#S
#S
102o
102s
112
SIGNATURE
DETECTOR
113;FIXED
PATTERN
DETECTION
SIGNAL

FIG . 2

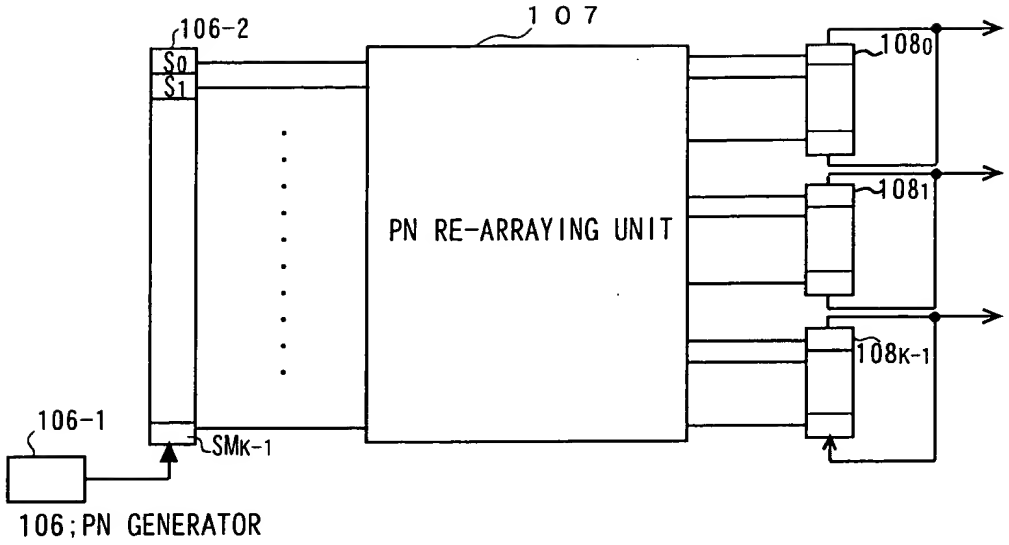

106-2
S0
S1
SMK-1
107
PN RE-ARRAYING UNIT
1080
1081
108K-1
106-1
106;PN GENERATOR

FIG . 3

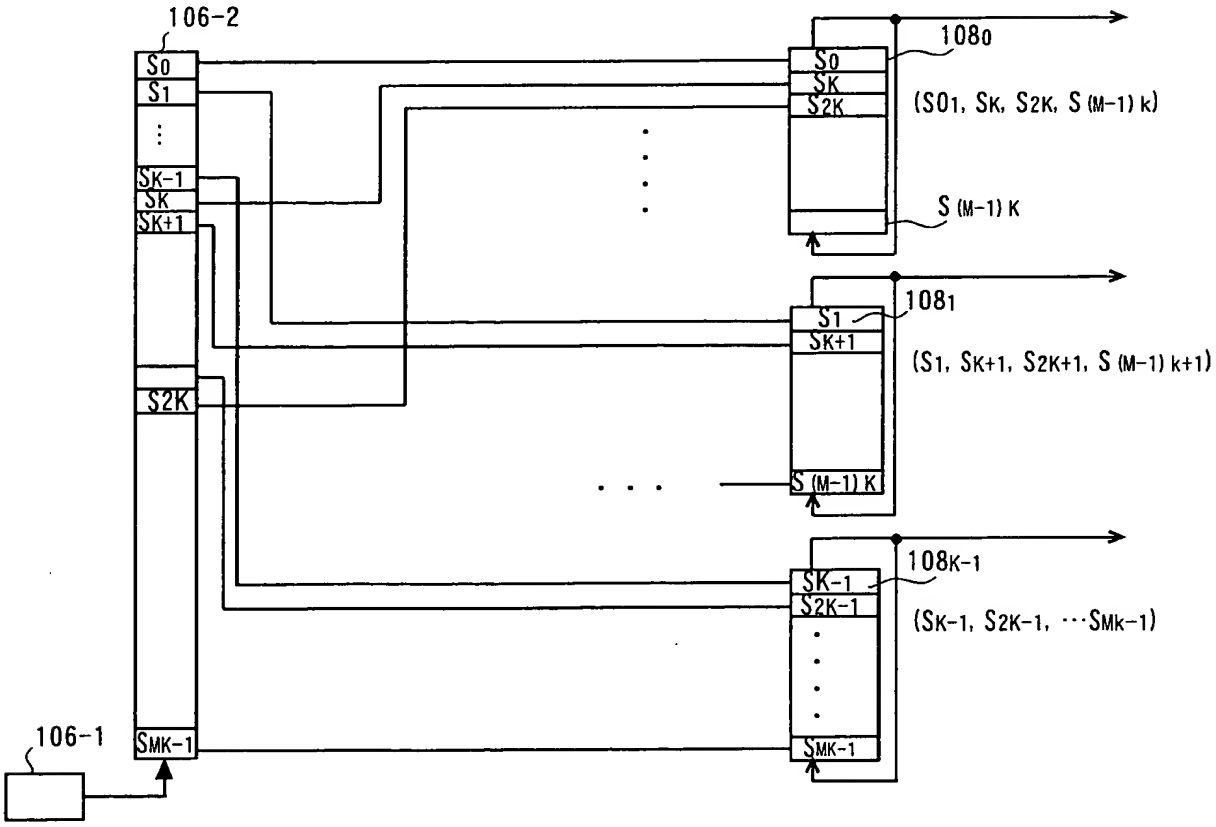

106-2
S0
S1
SK-1
SK
SK+1
S2K
SMK-1
1080
S0
SK
S2K
(SO1, SK, S2K, S (M-1) k)
S (M-1) K
1081
S1
SK+1
(S1, SK+1, S2K+1, S (M-1) k+1)
S (M-1) K
108K-1
SK-1
S2K-1
(SK-1, S2K-1, ···SMk-1)
SMK-1
106-1

FIG . 4

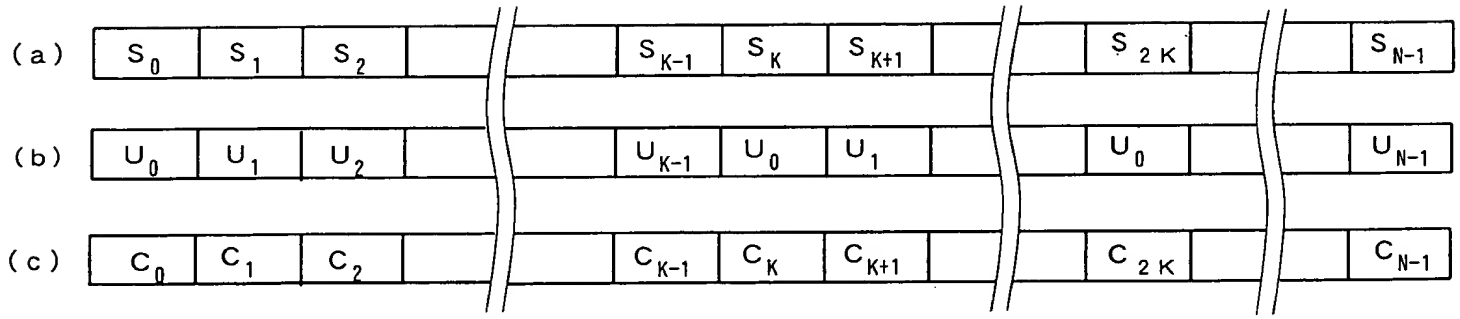


FIG. 5

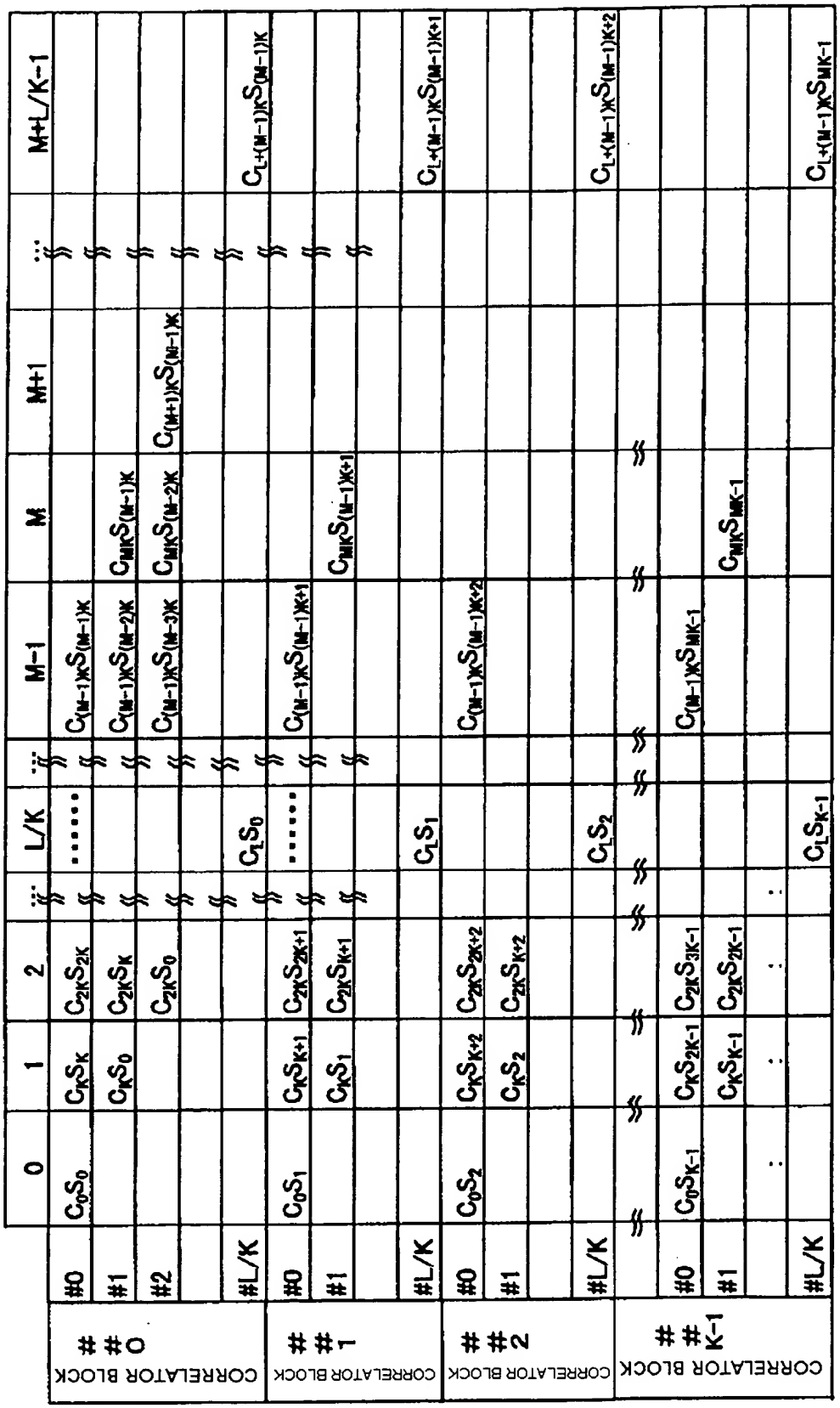

CORRELATOR BLOCK #0
CORRELATOR BLOCK #1
CORRELATOR BLOCK #2
CORRELATOR BLOCK #K-1
#0
#1
#2
#L/K
0
1
2
L/K
M-1
M
M+1
M+L/K-1

FIG. 6

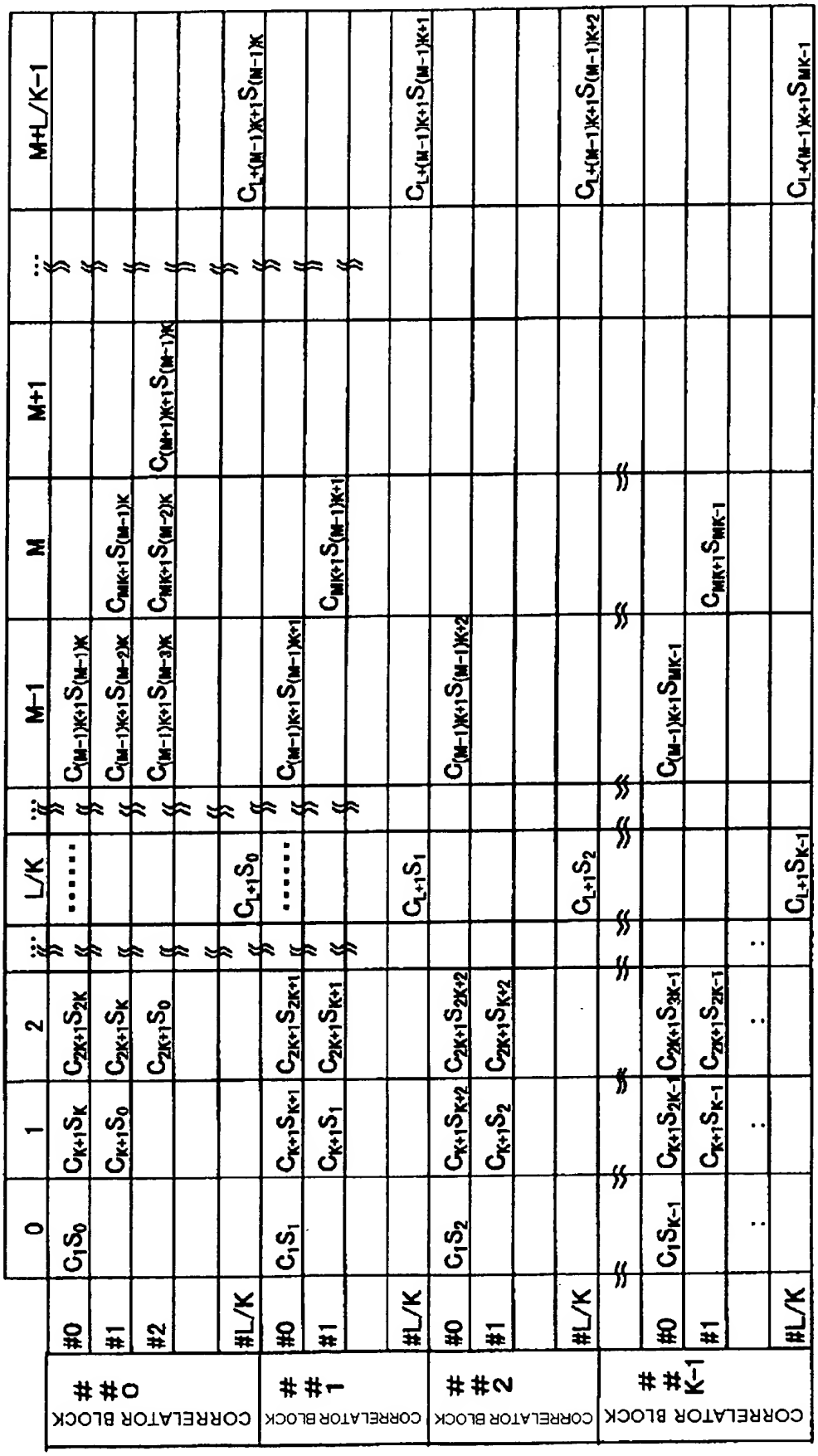

CORRELATOR BLOCK ##0
CORRELATOR BLOCK ##1
CORRELATOR BLOCK ##2
CORRELATOR BLOCK ##K-1
0
1
2
L/K
M-1
M
M+1
M+L/K-1
#0
#1
#2
#L/K

FIG . 7

		1	2		K
CORRELATOR BLOCK ## 0	CORRELATOR #0	D_0U_0	D_1U_0	••••	$D_{K-1}U_0$
	CORRELATOR #1	D_KU_0	$D_{K+1}U_0$	••••	$D_{2K-1}U_0$
	CORRELATOR #2	$D_{2K}U_0$	$D_{2K+1}U_0$	••••	$D_{3K-1}U_0$
	:	:	:	••••	:
	CORRELATOR #L/K	D_LU_0	$D_{L+1}U_0$	••••	$D_{L+K-1}U_1$
CORRELATOR BLOCK ## 1	CORRELATOR #0	$D_{-1}U_1$	D_0U_1	••••	$D_{K-2}U_1$
	CORRELATOR #1	$D_{K-1}U_1$	D_KU_1	••••	$D_{2K-2}U_1$
	CORRELATOR #2	$D_{2K-1}U_1$	$D_{2K}U_1$	••••	$D_{3K-2}U_1$
	:	:	:	••••	:
	CORRELATOR #L/K	$D_{L-1}U_1$	D_LU_1	••••	$D_{L+K-2}U_0$
≈	≈ : ≈	≈ : ≈	≈ : ≈	≈ •••• ≈	≈ : ≈
CORRELATOR BLOCK ## K-1	CORRELATOR #0	$D_{-(K-1)}U_{K-1}$	$D_{-K+2}U_{K-1}$	••••	D_0U_{K-1}
	CORRELATOR #1	D_1U_{K-1}	D_2U_{K-1}	••••	D_KU_{K-1}
	CORRELATOR #2	$D_{K+1}U_{K-1}$	$D_{K+2}U_{K-1}$	••••	$D_{2K}U_{K-1}$
				••••	
	CORRELATOR #L/K	$D_{L-(K-1)}U_{K-1}$	$D_{L-K+2}U_{K-1}$	••••	D_LU_{K-1}

FIG . 8(a)

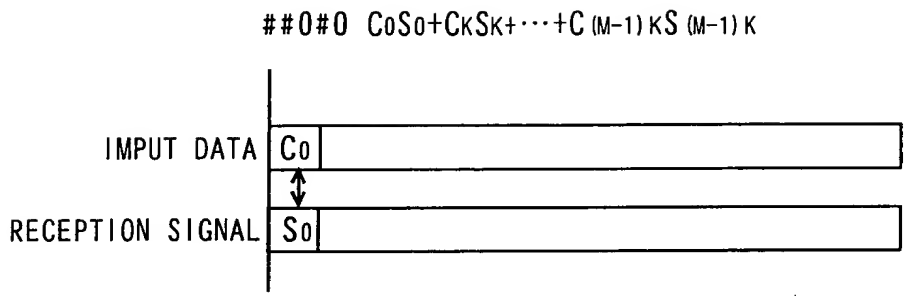

##0#0 C0S0+CKSK+…+C(M-1)KS(M-1)K
IMPUT DATA
C0
RECEPTION SIGNAL
S0

FIG . 8(b)

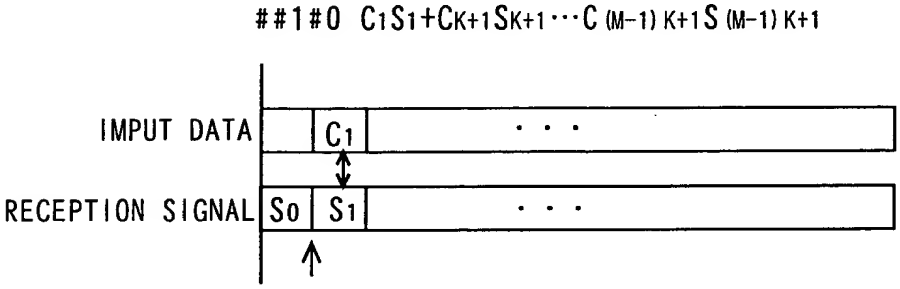

##1#0 C1S1+CK+1SK+1…C(M-1)K+1S(M-1)K+1
IMPUT DATA
C1
RECEPTION SIGNAL
S0
S1

FIG . 9

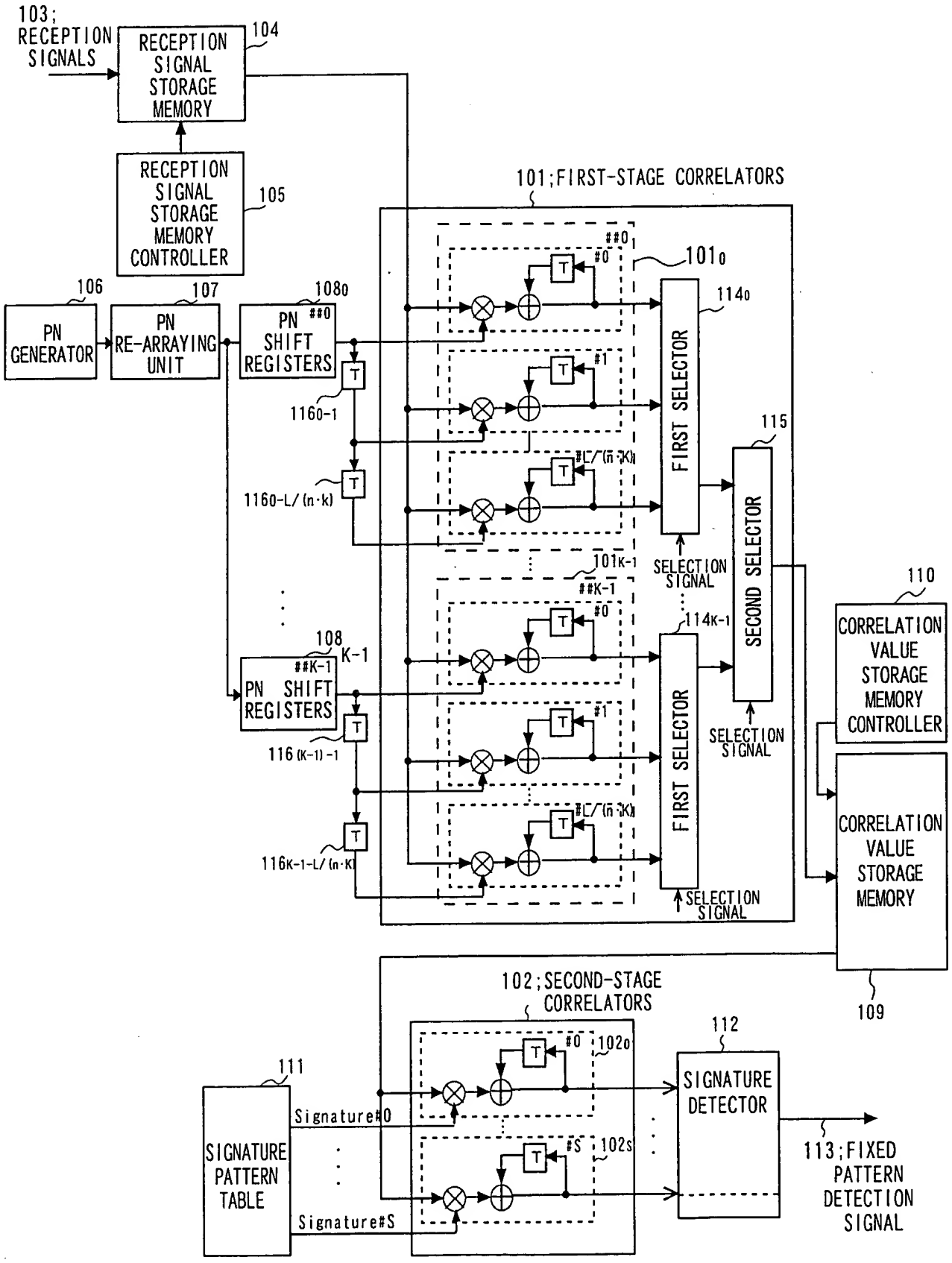

103;
RECEPTION
SIGNALS
RECEPTION
SIGNAL
STORAGE
MEMORY
104
RECEPTION
SIGNAL
STORAGE
MEMORY
CONTROLLER
105
101;FIRST-STAGE CORRELATORS
106
PN
GENERATOR
107
PN
RE-ARRAYING
UNIT
108₀
PN
SHIFT
REGISTERS
116₀-1
116₀-L/(n·k)
101₀
114₀
FIRST SELECTOR
115
SECOND SELECTOR
SELECTION
SIGNAL
101K-1
114K-1
108
K-1
PN SHIFT
REGISTERS
116(K-1)-1
116K-1-L/(n·K)
110
CORRELATION
VALUE
STORAGE
MEMORY
CONTROLLER
CORRELATION
VALUE
STORAGE
MEMORY
109
102;SECOND-STAGE
CORRELATORS
111
SIGNATURE
PATTERN
TABLE
Signature#0
Signature#S
102₀
102S
112
SIGNATURE
DETECTOR
113;FIXED
PATTERN
DETECTION
SIGNAL

FIG . 10

		0	1	2	⋯	L/(n·k)	⋯	M−1	M	M+1	⋯	M+L/(n·K)−1
CORRELATOR BLOCK ## 0	#0	C_0S_0	C_KS_K	$C_{2K}S_{2K}$		·····		$C_{(M-1)K}S_{(M-1)K}$				
	#1		C_KS_0	$C_{2K}S_K$				$C_{(M-1)K}S_{(M-2)K}$	$C_{MK}S_{(M-1)K}$			
	#2			$C_{2K}S_0$				$C_{(M-1)K}S_{(M-3)K}$	$C_{MK}S_{(M-2)K}$	$C_{(M+1)K}S_{(M-1)K}$		
	#L/(n·K)					$C_{L/n}S_0$						$C_{L/n+(M-1)K}S_{(M-1)K}$
CORRELATOR BLOCK ## 1	#0	C_0S_1	C_KS_{K+1}	$C_{2K}S_{2K+1}$		·····		$C_{(M-1)K}S_{(M-1)K+1}$				
	#1		C_KS_1	$C_{2K}S_{K+1}$					$C_{MK}S_{(M-1)K+1}$			
	#L/(n·K)					$C_{L/n}S_1$						$C_{L/n+(M-1)K}S_{(M-1)K+1}$
CORRELATOR BLOCK ## 2	#0	C_0S_2	C_KS_{K+2}	$C_{2K}S_{2K+2}$				$C_{(M-1)K}S_{(M-1)K+2}$				
	#1		C_KS_2	$C_{2K}S_{K+2}$								
	#L/(n·K)					$C_{L/n}S_2$						$C_{L/2+(M-1)K}S_{(M-1)K+2}$
CORRELATOR BLOCK ## K-1		≈	≈	≈	≈	≈	≈	≈	≈	≈		
	#0	C_0S_{K-1}	C_KS_{2K-1}	$C_{2K}S_{3K-1}$				$C_{(M-1)K}S_{MK-1}$				
	#1		C_KS_{K-1}	$C_{2K}S_{2K-1}$					$C_{MK}S_{MK-1}$			
		:	:	:	:							
	#L/(n·K)					$C_{L/n}S_{K-1}$						$C_{L/2+(M-1)K}S_{MK-1}$

FIG . 11

		1	2		K
CORRELATOR BLOCK ## 0	CORRELATOR #0	D_0U_0	D_1U_0	....	$D_{K-1}U_0$
	CORRELATOR #1	D_KU_0	$D_{K+1}U_0$	....	$D_{2K-1}U_0$
	CORRELATOR #2	$D_{2K}U_0$	$D_{2K+1}U_0$	....	$D_{3K-1}U_0$
	:	:	:	....	:
	CORRELATOR #L/(n·K)	$D_{L/n}U_0$	$D_{L/n+1}U_0$	....	$D_{L/n+K-1}U_0$
CORRELATOR BLOCK ## 1	CORRELATOR #0	$D_{-1}U_1$	D_0U_1	....	$D_{K-2}U_1$
	CORRELATOR #1	$D_{K-1}U_1$	D_KU_1	....	$D_{2K-2}U_1$
	CORRELATOR #2	$D_{2K-1}U_1$	$D_{2K}U_1$	....	$D_{3K-2}U_0$
	:	:	:	....	:
	CORRELATOR #L/(n·K)	$D_{L/n-1}U_1$	$D_{L/n}U_1$	....	$D_{L/n+K-2}U_0$
≈	≈ :	≈ :	~ :	≈	≈ : ≈
CORRELATOR BLOCK ## K-1	CORRELATOR #0	$D_{-(K-1)}U_{K-1}$	$D_{-K+2}U_{K-1}$	....	D_0U_{K-1}
	CORRELATOR #1	D_1U_{K-1}	D_2U_{K-1}	....	D_KU_{K-1}
	CORRELATOR #2	$D_{K+1}U_{K-1}$	$D_{K+2}U_{K-1}$	....	$D_{2K}U_{K-1}$
				....	
	CORRELATOR #L/(n·K)	$D_{L/n-(K-1)}U_{K-1}$	$D_{L/n-K+2}U_{K-1}$	....	$D_{L/n}U_{K-1}$

FIG . 12

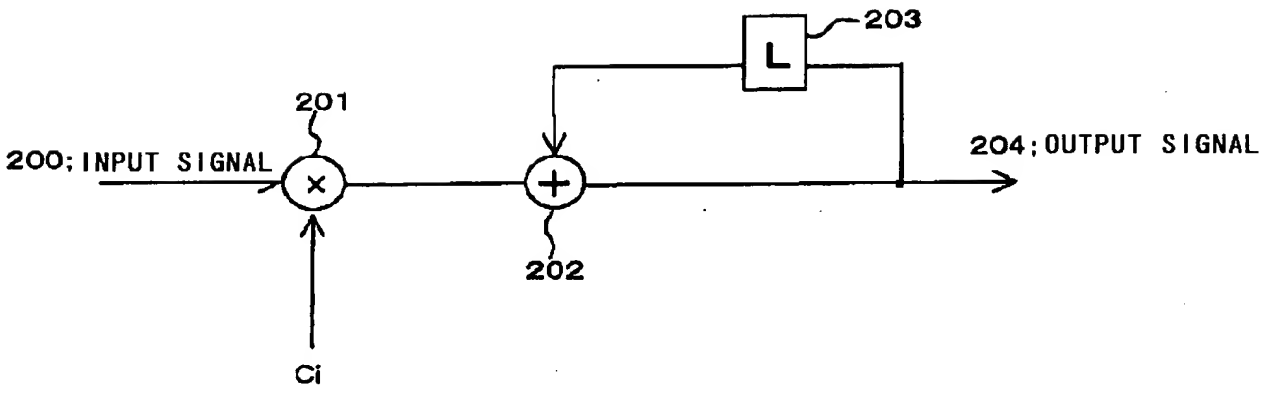
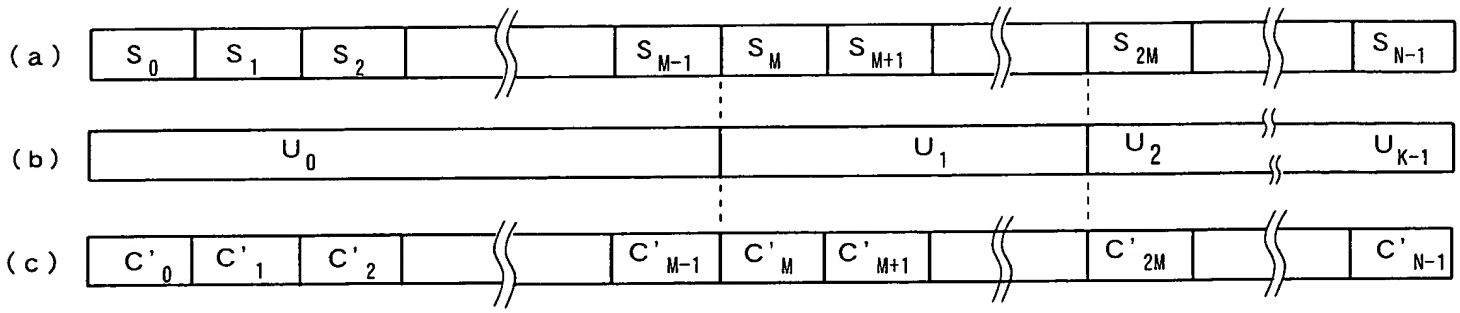


FIG . 13


(a)
S0
S1
S2
SM-1
SM
SM+1
S2M
SN-1
(b)
U0
U1
U2
UK-1
(c)
C'0
C'1
C'2
C'M-1
C'M
C'M+1
C'2M
C'N-1